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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,227	09/20/2001	Daniel Goodman	ASX-055	5862

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EXAMINER	
HASSANZADEH, PARVIZ	

ART UNIT	PAPER NUMBER
1763	

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/960,227	GOODMAN ET AL.	
	Examiner	Art Unit	
	Parviz Hassanzadeh	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) *18-29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 30-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *1/02* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

Applicant's election of Group I, Species 4, in Paper No. 8/25/03 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 18-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8/25/03. It is noted that all apparatus claims have been examined in the present office action.

Specification

The disclosure is objected to because of the following informalities: on page 10, line 12, it is suggested to delete "Fig. 8" and substitute therefor "Fig. 8A and Fig. 8B".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Dible (US Patent No. 5,573,595).

Dibble teaches an RF plasma generator (Fig. 8) comprising:

a variable frequency RF generator 604;

a matching network 228 (match circuit) comprising at least one variable impedance component, the matching network including a first port that is electromagnetically coupled to the output of the RF generator 604 and a second port;

a load 202 (plasma generating element) that is electromagnetically coupled to the second port of the matching network; and

a plasma chamber 124 (Fig. 1) for containing a plasma having a power, the plasma chamber being electromagnetically coupled to the load, the plasma chamber receiving electromagnetic radiation having a power from the load, wherein

adjusting the frequency of the RF generator 604 changes the power in the plasma detected by a measurement device 210 and a control circuit 606 (column 8, lines 7-67).

Further regarding claims 2-7: the load 202 may be an inductive or a capacitive load as shown in Fig. 1, 2.

Further regarding claims 12-16: the system includes a measurement device 210 (sensor) and a control circuit 606 for controlling the variable RF generator in response to measured changed in the load.

Claims 1-7, 12-16, 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Mavretic et al (US Patent No. 5,654,679).

Mavretic et al teach an RF plasma generator (Fig. 3) comprising:

a variable frequency RF generator 210;

a matching network 220;

a load 310, 311 (plasma generating element); and

a plasma chamber 230, wherein

adjusting the frequency of the RF generator 604 changes the power in the plasma (column 3, lines 20-62 and abstract).

Further regarding claims 1-7: it is the Examiner's position that the plasma generating element is not limited and it may be an inductive or a capacitive load.

Further regarding claims 12-16: the system includes a measurement device 02 (sensor) and a controller 608, wherein the frequency of the applied voltage is varies to match the impedance of the load with the impedance of the RF power generator (abstract).

Claims 32, 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Sorensen et al (US Patent No. 5,815,047).

Sorensen et al teach an RF plasma generator (Fig. 1) comprising:

an RF generator 22 including an RF output that generates electromagnetic radiation at a frequency;

a matching network 20 including a load capacitor 24, inductor 26, tuning capacitor 28, and air variable capacitors 30, 32, wherein the matching network 20 is arranged between the RF generator 22 (via a first port) and a load 16 (via a second port) and being in communication with a system control (via a third port);

a load 16 (plasma generating element) that is coupled to the second port of the matching network; and

a plasma chamber 13 for containing a plasma therein, the plasma chamber may be electromagnetically coupled to the load (column 3, lines 3-57 and column 4, lines 57-62).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8-11, 17, 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorensen et al (US Patent No. 5,815,047).

Sorensen et al teach all limitations of the claims as discussed above except for detail of the matching network, for example, including a resistive impedance, amplifier, switching transistor, or variable capacitor.

It is the Examiner's position that substitution of elements in the matching network with other conventional elements for the achieving the same effect would have been obvious to one of ordinary skill in the art at the time of the invention. See MPEP 2144.06, Art Recognized Equivalent for the Same Purpose, Substituting Equivalents Known for the Same Purpose (in re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982)).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Keane (US Patent No. 5,565,737), Ishii et al (US Patent No. 6,311,638 B1), Patrick et al (US Patent No. 5,556,549), and Zhao et al (US Patent No. 5,643,364) teach an RF power generator, a matching network, a sensor, and a controller wherein the controller controls the RF generator in response to the sensor output.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parviz Hassanzadeh whose telephone number is (703)308-2050. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703)308-1633. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

P. Hassanzadeh
Parviz Hassanzadeh
Primary Examiner
Art Unit 1763

October 28, 2003